

SEQUENCE LISTING

<110> Arthur, Jonathan Wesley
 Wilkins, Marc
 Traini, Mathew Danger

<120> ANNOTATION OF GENOME SEQUENCES

<130> 3170.1006-000

<140> 10/507,257

<141> 2005-04-27

<150> PCT/AU03/00300

<151> 2003-03-13

<150> PS1118

<151> 2002-03-13

<160> 96

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<212> PRT

<213> Mycobacterium tuberculosis

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			20					25					30		
Pro	Glu	Ile	Ser	Ala	Arg	Ile	Leu	Met	Lys	Leu	Lys	Arg	Asp	Ala	Glu
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Ala	Tyr	Leu	Gly	Glu	Asp	Ile	Thr	Asp	Ala	Val	Ile	Thr	Thr	Pro	Ala
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Tyr	Phe	Asn	Asp	Ala	Gln	Arg	Gln	Ala	Thr	Lys	Asp	Ala	Gly	Gln	Ile
65					70				75					80	
Ala	Gly	Leu	Asn	Val	Leu	Arg	Ile	Val	Asn	Glu	Pro	Thr	Ala	Ala	Ala
			85						90					95	
Leu	Ala	Tyr	Gly	Leu	Asp	Lys	Gly	Glu	Lys	Glu	Gln	Arg	Ile	Leu	Val
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Phe	Asp	Leu	Gly	Gly	Gly	Thr	Phe	Asp	Val	Ser	Leu	Leu	Glu	Ile	Gly
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Glu	Gly	Val	Val	Glu	Val	Arg	Ala	Thr	Ser	Gly	Asp	Asn	His	Leu	Gly
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Gly	Asp	Asp	Trp	Asp	Gln	Arg	Val	Val	Asp	Trp	Leu	Val	Asp	Lys	Phe
145					150				155					160	
Lys	Gly	Thr	Ser	Gly	Ile	Asp	Leu	Thr	Lys	Asp	Lys	Met	Ala	Met	Gln
				165					170					175	
Arg	Leu	Arg	Glu	Ala	Ala	Glu	Lys	Ala	Lys	Ile	Glu	Leu	Ser	Ser	Ser
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Gln	Ser	Thr	Ser	Ile	Asn	Leu	Pro	Tyr	Ile	Thr	Val	Asp	Ala	Asp	Lys
			195				200						205		

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Asn Pro Leu Phe Leu Asp Glu Gln Leu Thr Arg Ala Glu Phe Gln Arg
 210          215          220
Ile Thr Gln Asp Leu Leu Asp Arg Thr Arg Lys Pro Phe Gln Ser Val
225          230          235          240
Ile Ala Asp Thr Gly Ile Ser Val Ser Glu Ile Asp His Val Val Leu
          245          250          255
Val Gly Gly Ser Thr Arg Met Pro Ala Val Thr Asp Leu Val Lys Glu
          260          265          270
Leu Thr Gly Gly Lys Glu Pro Asn Lys Gly Val Asn Pro Asp Glu Val
          275          280          285
Val Ala Val Gly Ala Ala Leu Gln Ala Gly Val Leu Lys Gly Glu Val
          290          295          300
Lys Asp Val Leu Leu Leu Asp Val Thr Pro Leu Ser Leu Gly Ile Glu
305          310          315          320
Thr Lys Gly Gly Val Met Thr Arg Leu Ile Glu Arg Asn Thr Thr Ile
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Asp Ala Gly Gln Ile Ala Gly Leu Asn Val Leu Arg
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Asn Pro Leu Phe Leu Asp Glu Gln Leu Thr Arg
1 5 10

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His Met Gly Ser Asp Trp Ser Ile Glu Ile Asp Gly Lys
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<212> PRT

<213> Mycobacterium tuberculosis

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His Met Gly Ser Asp Trp Ser Ile Glu Ile Asp Gly Lys
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<213> Mycobacterium tuberculosis

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Ile Val Asn Glu Pro Thr Ala Ala Ala Leu Ala Tyr Gly Leu Asp Lys
1 5 10 15

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<211> 16

<212> PRT

<213> Mycobacterium tuberculosis

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<400> 11

Ala Thr Ser Gly Asp Asn His Leu Gly Gly Asp Asp Trp Asp Gln Arg
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<210> 12

<211> 17

<212> PRT

<213> Mycobacterium tuberculosis

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Asp Val Leu Leu Leu Asp Val Thr Pro Leu Ser Leu Gly Ile Glu Thr
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 Lys

<210> 13

<211> 20

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<213> Mycobacterium tuberculosis

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Gly Val Asn Pro Asp Glu Val Val Ala Val Gly Ala Ala Leu Gln Ala
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 Gly Val Leu Lys
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<213> Mycobacterium tuberculosis

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 1 5 10 15
 Asp Pro Gln Ser Pro Ala Met His Arg Gln Arg Gly Asp Asp Arg Gly
 20 25 30
 Val Arg Arg Ala Ala Gly Gly Arg Gly Ser Ala Ala Val Ala Ala Gly
 35 40 45
 Arg Ala Gln
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<211> 36

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<213> Mycobacterium tuberculosis

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Pro Gly Ser Ala Arg Asp Ala Gly Ala Gly Ala Val Thr Arg Leu Thr
 1 5 10 15
 Leu His Leu Ala Tyr Pro Asp Thr Leu Ala Thr Arg Lys Gln Gly Gly
 20 25 30
 Ala Leu Glu Cys
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<400> 16
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 1 5 10 15
 Gly Ala Arg Ala Arg Thr Asn Ala Glu Ser Pro Gly Asn Ser Asp Gly
 20 25 30
 Ser Gly Ala Arg Pro Gly Pro Thr Ala Asn Ser Gly Pro Gly Glu Arg
 35 40 45
 Pro Gly Leu
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<400> 18
 Ser Lys
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 <212> PRT
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 Lys Ile Leu Val Gln Ala Asn Glu Ala Glu Thr Thr Thr Ala Ser Gly
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 Leu Val Ile Pro Asp Thr Ala Lys Glu Lys Pro Gln Glu Gly Thr Val
 35 40 45
 Val Ala Val Gly Pro Gly Arg Trp Asp Glu Asp Gly Glu Lys Arg Ile
 50 55 60
 Pro Leu Asp Val Ala Glu Gly Asp Thr Val Ile Tyr Ser Lys Tyr Gly
 65 70 75 80
 Gly Thr Glu Ile Lys Tyr Asn Gly Glu Glu Tyr Leu Ile Leu Ser Ala
 85 90 95
 Arg Asp Val Leu Ala Val Val Ser Lys
 100 105

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 <213> Mycobacterium tuberculosis

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 1 5 10

<210> 21
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 <213> Mycobacterium tuberculosis

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<210> 22
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 20 25 30
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 35 40 45
 Val Trp Arg Thr His Gly Tyr Gln Arg Arg Arg His Gly Gly Thr
 50 55 60

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 Asp Arg Ala Gly Arg
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<400> 24
 Tyr Gly Gly Thr Glu Ile Lys
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<210> 25
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Phe Pro Gly Arg
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Val Asn Ile Lys Pro Leu Glu Asp Lys
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<210> 29
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1 5 10

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Glu Lys Pro Gln Glu Gly Thr Val Val Ala Val Gly Pro Gly Arg

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1 5 10 15

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<210> 33
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<400> 33
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 20 25 30
 Ala Asp Gly Pro Ala Arg His Gln Ser Ala Val Glu Pro Ser Ala Gly
 35 40 45
 Trp Trp Ile Arg Pro Gln Arg Gly Arg Gly Pro Ala Ala Arg Gly Val
 50 55 60
 Ala Thr Trp Arg Arg Trp Val Val Asp Pro His Ala Ala Asp Val Ser
 65 70 75 80
 Ala Asp Arg Lys Ala Gly Cys Pro Leu Gly Asp Ala Gly Gly Cys Cys
 85 90 95
 Arg Ile Val Gly Asp Gly Trp Arg Arg Ser Gly Gly Cys Gly Ser Asp
 100 105 110
 Gly Pro Gly Cys Ala Ile Arg Arg Leu His Gln Ala Gly Ser Gly Arg
 115 120 125
 Ala Gly Thr Ala Arg Ala Gly Ala
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<400> 34

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Arg Arg Arg Arg Gly Arg Leu Gly Arg Arg Gly Arg Leu Val Ser Ser
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 Arg Asn Asp Asn Arg Leu Pro Gly His Pro Gly Arg Lys Thr Cys Gln
 20 25 30
 His Phe Gly Glu Glu Gly Lys Glu Arg Lys
 35 40

<210> 35

<211> 102

<212> PRT

<213> Mycobacterium tuberculosis

<400> 35

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 1 5 10 15
 Ala Gly Asn Phe Glu Arg Ile Ser Gly Asp Leu Lys Thr Gln Ile Asp
 20 25 30
 Gln Val Glu Ser Thr Ala Gly Ser Leu Gln Gly Gln Trp Arg Gly Ala
 35 40 45
 Ala Gly Thr Ala Ala Gln Ala Val Val Arg Phe Gln Glu Ala Ala
 50 55 60
 Asn Lys Gln Lys Gln Glu Leu Asp Glu Ile Ser Thr Asn Ile Arg Gln
 65 70 75 80
 Ala Gly Val Gln Tyr Ser Arg Ala Asp Glu Glu Gln Gln Gln Ala Leu
 85 90 95
 Ser Ser Gln Met Gly Phe
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<210> 36

<211> 11

<212> PRT

<213> Mycobacterium tuberculosis

<400> 36

Pro Ala Asn Thr Lys Arg Asn Gly Ala Lys Thr
 1 5 10

<210> 37

<211> 34

<212> PRT

<213> Mycobacterium tuberculosis

<400> 37

Gln Ser Ser Ser Gly Ile Ser Arg Val Ser Arg Pro Arg Gln Ala Gln
 1 5 10 15
 Ser Arg Glu Met Ser Arg Pro Phe Ile Pro Ser Leu Thr Arg Gly Ser
 20 25 30
 Ser Pro

<210> 38

<211> 19

<212> PRT

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<213> Mycobacterium tuberculosis

<400> 38

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1				5					10					15	
Val	Ser	Ser													

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<212> PRT

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<400> 39

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1				5			

<210> 40

<211> 13

<212> PRT

<213> Mycobacterium tuberculosis

<400> 40

Gly	Ala	Ala	Gly	Thr	Ala	Ala	Gln	Ala	Ala	Val	Val	Arg
1				5					10			

<210> 41

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<212> PRT

<213> Mycobacterium tuberculosis

<400> 41

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1				5					10	

<210> 42

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<213> Mycobacterium tuberculosis

<400> 42

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1				5					10		

<210> 43

<211> 14

<212> PRT

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<400> 43

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1				5					10				

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<210> 44
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 1 5 10 15

<210> 45
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 1 5 10 15
 Trp Arg

<210> 46
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 <213> Mycobacterium tuberculosis

<400> 46
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 1 5 10 15
 Gly Arg

<210> 47
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 <212> PRT
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<400> 47
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 1 5 10 15
 Asn Ala

<210> 48
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 <213> Mycobacterium tuberculosis

<400> 48
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 1 5 10 15
 Arg Arg His Asp Gly Arg Ser Arg Cys Arg Cys Phe Thr Pro Trp Val
 20 25 30

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Arg Trp Ala Val Cys Glu Pro Asp Ser Arg Ala Lys Ile Pro Asn Ser
 35 40 45
 Ala Trp Arg Arg Cys Ala
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<210> 49

<211> 68

<212> PRT

<213> Mycobacterium tuberculosis

<400> 49

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 1 5 10 15
 Val Gly Ser His Val Arg Trp Arg Ser Arg Ser Gly Arg Pro Pro Gly
 20 25 30
 Ser Gly Arg Arg Cys Ala Pro Ser Gly Arg Thr Pro Arg Pro Arg Asp
 35 40 45
 Pro Lys Arg Pro Arg Asp Ala Ala Gly Asn Val Asp Arg Arg His Val
 50 55 60
 Leu His Arg Ser
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<210> 50

<211> 5

<212> PRT

<213> Mycobacterium tuberculosis

<400> 50

Ala Thr Gly Leu Cys
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<210> 51

<211> 55

<212> PRT

<213> Mycobacterium tuberculosis

<400> 51

Asn Pro Ala Pro Ile Thr Arg Ser Pro Ser Ser Arg Pro Thr Asp Gly
 1 5 10 15
 Cys Arg Tyr Ala Ser Met Ala Arg Trp Ser Arg Thr Arg Pro Arg Arg
 20 25 30
 Cys Ala Cys Arg Lys Pro Val Thr Leu Gln Cys Asn Ile Phe Arg Trp
 35 40 45
 Pro Thr Trp Tyr Arg Ile Gly
 50 55

<210> 52

<211> 19

<212> PRT

<213> Mycobacterium tuberculosis

<400> 52

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1	5	10	15
Ile Thr Ala			

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 Leu Pro Thr Pro Ala Thr Ser Ser Thr Thr
 1 5 10

<210> 54
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 <212> PRT
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 1 5 10

<210> 55
 <211> 83
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 20 25 30
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 35 40 45
 Leu Glu Asp Ala Asp Glu Arg Ala Val Ile Ser Gly Pro Val Gly Ala
 50 55 60
 His Thr Val Ala Met Pro Leu Asp His Tyr Arg Phe Thr Leu Val Asp
 65 70 75 80
 Ala Ala Asp

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<400> 56
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<210> 57
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<212> PRT

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Trp Val Ser Thr Met Leu Arg
1 5

<210> 58

<211> 6

<212> PRT

<213> Mycobacterium tuberculosis

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Trp Pro Thr Trp Tyr Arg
1 5

<210> 59

<211> 7

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Cys Phe Thr Pro Trp Val Arg
1 5

<210> 60

<211> 11

<212> PRT

<213> Mycobacterium tuberculosis

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Ser Pro Ser Ser Arg Pro Thr Asp Gly Cys Arg
1 5 10

<210> 61

<211> 18

<212> PRT

<213> Mycobacterium tuberculosis

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1 5 10 15
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<210> 62

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<212> PRT

<213> Mycobacterium tuberculosis

<400> 62

Cys Arg

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<212> PRT
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1 5 10 15
Ser Ser Pro

<210> 65
<211> 7
<212> PRT
<213> Homo sapiens

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Gly His Arg Thr Arg His His
1 5

<210> 66
<211> 8
<212> PRT
<213> Homo sapiens

<400> 66
Arg Gly Arg His Thr Arg His Arg
1 5

<210> 67
<211> 8
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<213> Homo sapiens

<400> 67
Arg Gly Tyr Cys Thr Arg His Arg
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<210> 68
<211> 266

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<212> PRT

<213> Homo sapiens

<400> 68

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 1           5           10
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          20           25           30
Arg Asn Arg Gln Arg Gly Arg Arg Pro Arg His Arg Gln Arg Gly Arg
          35           40           45
Arg Pro Gly His Arg Gln Arg Gly Arg Arg Pro Gly His Arg Gln Gly
          50           55           60
Gly Arg Arg Pro Arg His Arg Gln Arg Gly Arg Arg Pro Gly His Arg
65           70           75           80
Gln Arg Gly Arg Arg Pro Gly His Arg Gln Gly Gly Arg Arg Pro Gly
          85           90           95
His Arg Gln Arg Gly Arg Arg Pro Gly His Arg Gln Arg Gly Arg Arg
          100          105          110
Pro Gly His Arg Gln Gly Gly Arg Arg Pro Gly His Arg Gln Arg Gly
          115          120          125
Arg Arg Pro Gly His Arg Gln Arg Gly Arg Arg Pro Trp His Arg Gln
          130          135          140
Arg Gly Arg Arg Pro Gly His Arg Gln Arg Gly Arg Arg Pro Arg Asn
145          150          155          160
Arg Gln Arg Gly Arg Arg Pro Arg His Arg Gln Arg Gly Arg Arg Pro
          165          170          175
Gly His Arg Gln Gly Gly Cys Arg Pro Gly His Arg Gln Arg Gly Arg
          180          185          190
Arg Pro Gly His Arg Gln Arg Gly Arg Arg Pro Gly His Arg Gln Arg
          195          200          205
Gly Arg Arg Pro Lys His Arg Gln Arg Ala Val Tyr Asp Ile Ala Asn
210          215          220
Glu Asp Thr Leu Gln Ala Val Ala Asn Lys Tyr Thr Val His Asn Ile
225          230          235          240
Ala Asn Glu Gly Thr Val Gln Asp Ile Thr Asn Glu Gly Ala Leu Tyr
          245          250          255
Asp Ile Ala Asn Gly Thr Asp Lys Ala Arg
          260          265

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<210> 69

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<213> Homo sapiens

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Arg Gly Arg Cys Thr Arg His Cys
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<213> Homo sapiens

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1 5

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 Leu Ser Gln Glu
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<210> 72
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 <213> Homo sapiens

<400> 72
 Arg Pro Gly His Arg
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<210> 73
 <211> 34
 <212> PRT
 <213> Homo sapiens

<400> 73
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 Tyr Leu Asp Ser Gln Gly Ser Ala Ser Cys Thr His Phe Ser Ala Gln
 20 25 30
 Ile Ala

<210> 74
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 <212> PRT
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<400> 74
 Met Ser Leu Ala Ser Leu Val Asn Leu Cys Gln Ser Trp Lys Ile Asn
 1 5 10 15
 Asn Leu Met Ser Thr Val His Ser Asp Glu Ala Gly Met Leu Ser Tyr
 20 25 30
 Phe Leu Phe Glu Glu Leu Met Arg Cys Asp Lys Asp Ser Met Pro Asp
 35 40 45
 Gly Asn Leu Ser Glu Glu Glu Lys Leu Phe Leu Ser Tyr Phe Pro Leu
 50 55 60
 His Lys Phe Glu Leu Glu Gln Asn Ile Lys Glu Leu Asn Thr Leu Ala
 65 70 75 80
 Asp Gln Val Asp Thr Thr His Glu Leu Leu Thr Lys Thr Ser Leu Val
 85 90 95
 Ala Ser Ser Ser Gly Ala Val Ser Gly Val Met Asn Ile Leu Gly Leu
 100 105 110

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Ala	Leu	Ala	Pro	Val	Thr	Ala	Gly	Gly	Ser	Leu	Met	Leu	Ser	Ala	Thr
	115						120					125			
Gly	Thr	Gly	Leu	Gly	Ala	Ala	Ala	Ala	Ile	Thr	Asn	Ile	Val	Thr	Asn
	130						135					140			
Val	Leu	Glu	Asn	Arg	Ser	Asn	Ser	Ala	Ala	Arg	Asp	Lys	Ala	Ser	Arg
145					150					155					160
Leu	Gly	Pro	Leu	Thr	Thr	Ser	His	Glu	Ala	Phe	Gly	Gly	Ile	Asn	Trp
			165						170					175	
Ser	Glu	Ile	Glu	Ala	Ala	Gly	Phe	Cys	Val	Asn	Lys	Cys	Val	Lys	Ala
			180					185					190		
Ile	Gln	Gly	Ile	Lys	Asp	Leu	His	Ala	Tyr	Gln	Met	Ala	Lys	Ser	Asn
	195							200				205			
Ser	Gly	Phe	Met	Ala	Met	Val	Lys	Asn	Phe	Val	Ala	Lys	Arg	His	Ile
	210					215					220				
Pro	Phe	Trp	Thr	Ala	Arg	Gly	Val	Gln	Arg	Ala	Phe	Glu	Gly	Thr	Thr
225					230					235					240
Leu	Ala	Met	Thr	Asn	Gly	Ala	Trp	Val	Met	Gly	Ala	Ala	Gly	Ala	Gly
				245					250					255	
Phe	Leu	Leu	Met	Lys	Asp	Met	Ser	Ser	Phe	Leu	Gln	Ser	Trp	Lys	His
			260					265					270		
Leu	Glu	Asp	Glu	Ala	Arg	Thr	Glu	Thr	Ala	Glu	Glu	Leu	Arg	Ala	Leu
		275					280					285			
Ala	Lys	Lys	Leu	Glu	Gln	Glu	Leu	Asp	Arg	Leu	Thr	Gln	His	His	Arg
	290					295					300				
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305					310										

<210> 75
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 <213> Homo sapiens

<400> 75
 Ala Leu Ala Lys
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<400> 76
 Gly Val Gln Arg
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 Asn Phe Val Ala Lys
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Ser Asn Ser Ala Ala Arg
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<210> 79
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His Leu Pro Gln Lys
1 5

<210> 80
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Ala Ile Gln Gly Ile Lys
1 5

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Leu Thr Gln His His Arg
1 5

<210> 82
<211> 7
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<213> Homo sapiens

<400> 82
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1 5

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1 5

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Thr Glu Thr Ala Glu Glu Leu Arg
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Phe Glu Leu Glu Gln Asn Ile Lys
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His Ile Pro Phe Trp Thr Ala Arg
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Ser Asn Ser Gly Phe Met Ala Met Val Lys
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Asp Leu His Ala Tyr Gln Met Ala Lys
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<400> 89

Asp Met Ser Ser Phe Leu Gln Ser Trp Lys
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Asp Ser Met Pro Asp Gly Asn Leu Ser Glu Glu Glu Lys
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<211> 18

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<400> 92

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 Thr Lys

<210> 93

<211> 27

<212> PRT

<213> Homo sapiens

<400> 93

Ala Phe Glu Gly Thr Thr Leu Ala Met Thr Asn Gly Ala Trp Val Met
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 Gly Ala Ala Gly Ala Gly Phe Leu Leu Met Lys
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<211> 28

<212> PRT

<213> Homo sapiens

<400> 94

Leu Gly Pro Leu Thr Thr Ser His Glu Ala Phe Gly Gly Ile Asn Trp
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Ser Glu Ile Glu Ala Ala Gly Phe Cys Val Asn Lys
 20 25

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<211> 26

<212> PRT

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 20 25

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Thr Ser Leu Val Ala Ser Ser Ser Gly Ala Val Ser Gly Val Met Asn
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 20 25 30
 Leu Ser Ala Thr Gly Thr Gly Leu Gly Ala Ala Ala Ala Ile Thr Asn
 35 40 45
 Ile Val Thr Asn Val Leu Glu Asn Arg
 50 55